



22nd National NSF EPSCoR Conference

Coeur d'Alene, Idaho

October 24-27, 2011

Conference Program





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THIS CONFERENCE IS SUPPORTED BY:
NSF AWARD #EPS-1049614



Hosted at:



WELCOME



Dear Conference Participants:

Welcome to the 22nd National Science Foundation (NSF) Experimental Program to Stimulate Competitive Research (EPSCoR) Conference .

In early 2010, the National Science Foundation challenged the EPSCoR community to organize a national meeting that embodies the EPSCoR ideals of being a testbed for new ideas and concepts with measurable outcomes. EPSCoR, the only state-based program within the National Science Foundation, has increasing emphasis on building regional innovation environments, making this conference an ideal opportunity to explore the future role of EPSCoR.

The meeting comes at an opportune time as states struggle to recover economically and look to the future to address the research, education and competitiveness challenges articulated in 'Rising above the Gathering Storm – Approaching Category 5' (National Academies, 2010). We would like to acknowledge the many hours donated by the Organizing Committee and numerous subcommittees who rose to the challenge of designing a different type of meeting. Every attempt has been made to foster new partnerships and collaborations by maximizing discussion sessions and opportunities to network.

Speakers have been selected through an extensive nomination and selection procedure. The selected speakers have worked together during the past few weeks to identify the key issues for discussion and how the EPSCoR community can best contribute to these issues and strengthen national research competitiveness. The Water/ Environment and Energy themes were selected based on the content of many current Research Infrastructure Improvement (RII) Awards and these themes demonstrate the dependence and contribution of EPSCoR states to these national priorities. The sessions examining the role of research in economic development and best practices for EPSCoR State Committees sessions have evolved during the past year in response to the wishes of State Committees. The development of a highly skilled and diverse workforce and the role of cyberinfrastructure form the cross-cutting themes that pervade the entire meeting. We also appreciate the technical contributions of IBM and Apple in developing the program. Finally we encourage all participants to engage with the leadership role of early career scientists who are crafting the messages which will be developed during the meeting.

We would like to thank all for participating and ensuring this meeting is truly an expression of the national EPSCoR community. We look forward to the discussions and partnerships that will be emerge in Coeur d'Alene. Please enjoy the Idaho hospitality.

Gail McClure
Chair
EPSCoR Project Director Council

Doyle Jacklin
Chair
Idaho State EPSCoR Committee

Peter Goodwin
Project Director Idaho EPSCoR



GENERAL INFORMATION

Buffet Breakfast

Your conference name badge is your admission to the breakfast buffet at the Dockside restaurant on the mornings of Tuesday (10/25), Wednesday (10/26), and Thursday (10/27). The buffet will be open from 6:30 am until 8:30 am.

Internet Access

The Coeur d'Alene provides complimentary internet access in meeting and in hotel rooms. No password is necessary.

Plenary Session Presentations

Taped plenary session (both morning and afternoon) videos will be available on the conference website following the conference (www.nsfepscor2011.org).

Questions After Conference

Please direct questions after the conference to Idaho EPSCoR at epscor2011@uidaho.edu or 208-885-4144.

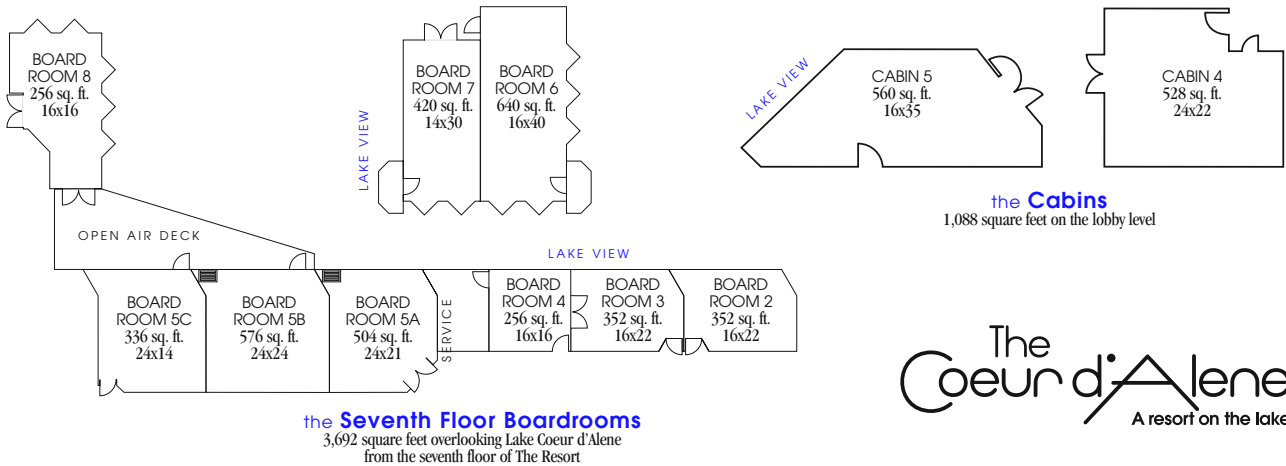
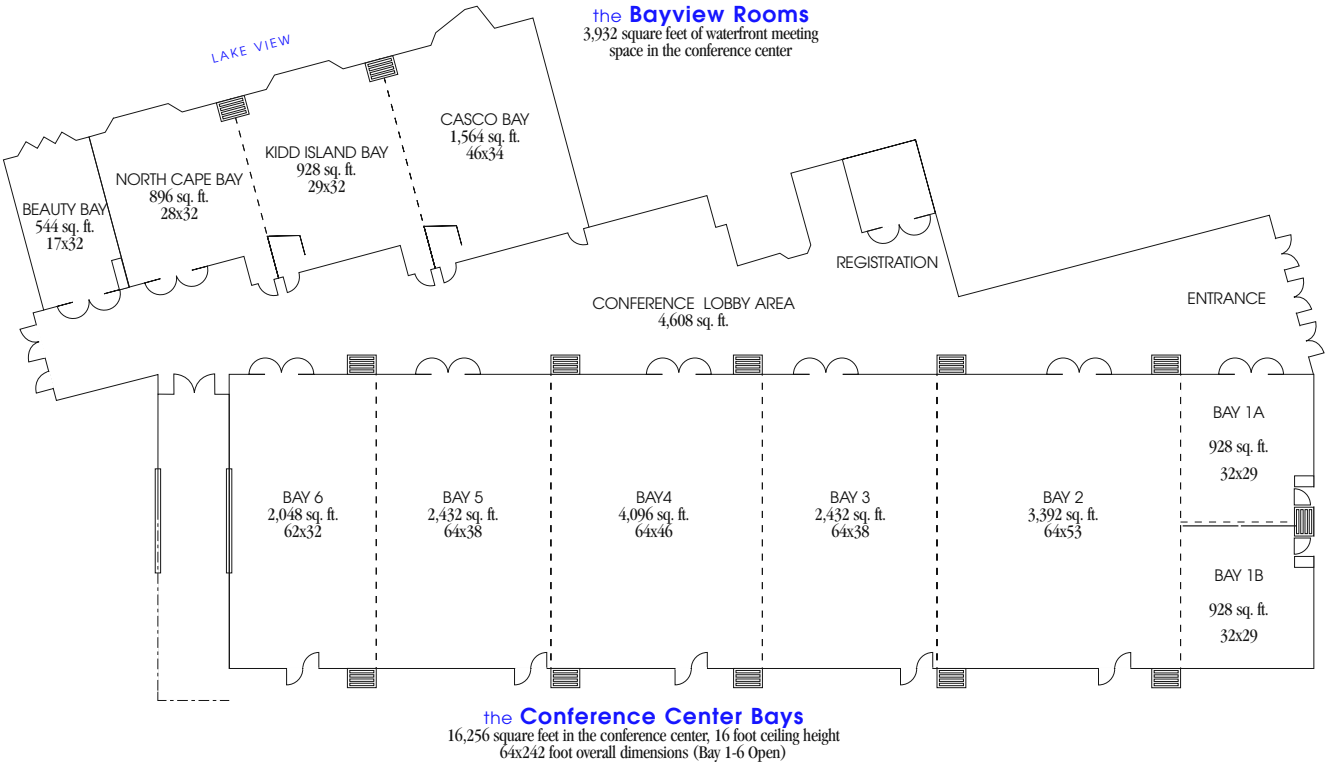
Special Dietary Requirements

Arrangements have been made, if you requested special dietary needs during the registration process. To receive the special meal prepared for you, please make yourself known to your server. Regrettably, we may not be able to respond to special dietary needs that have not been requested in advance.

Video Livestream

Morning plenary sessions will be streamed live online at the conference website www.nsfepscor2011.org.

MEETING ROOM LOCATIONS



The Coeur d'Alene
A resort on the lake

A photograph of two people in a canoe on a river. The person in the foreground is seated and rowing with a single oar. The person in the background is standing and holding a fishing rod. The river is surrounded by a dense forest with trees showing autumn foliage in shades of yellow and orange. The sky is clear and blue.

EXPERIMENTAL PROGRAM to STIMULATE COMPETITIVE RESEARCH CONFERENCE AGENDA

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AT A GLANCE

Start Time	Monday	Tuesday	Wednesday	Thursday
6:30 AM	Registration All Attendees All Day	Registration and Breakfast Buffet (Dockside Restaurant)	Breakfast Buffet (Dockside Restaurant)	Breakfast Buffet (Dockside Restaurant)
7:00 AM				
7:30 AM				
8:00 AM		Welcome Remarks (Bays 2 and 3) 9:15am Plenary Session: Water/Environment Sharon Nunes (Bays 2 and 3)	Plenary Session: Workforce Development Director, OIA/NSF and Tom Burnett (Bays 2 and 3)	Plenary Session: Energy Paul Werbos and Ronald Surdam (Bays 2 and 3)
8:30 AM				
9:00 AM				
9:30 AM		Networking Break (Casco/Kidd/North Cape)	Networking Break (Casco/Kidd/North Cape)	Networking Break (Casco/Kidd/North Cape)
10:00 AM				
10:30 AM				
11:00 AM		Plenary Session: Water/Environment Moderated (Bays 2 and 3)	Plenary Session: Workforce Development Moderated (Bays 2 and 3)	Plenary Session: Energy Moderated (Bays 2 and 3)
11:30 AM				
12:00 PM				
12:30 PM	PD/PA/EOD Meeting (Bay 5) Lunch Keynote: Denise Barnes	Lunch Keynote: Tim Killeen (Bays 2 and 3)	Lunch Keynote: Clifford Gabriel (Bays 2 and 3)	Lunch Plenary Session: Enhancing State and Regional Keynote: NSF (Bays 2 and 3)
1:00 PM				
1:30 PM				
2:00 PM		Concurrent Sessions: 1)Water/Env. (Bay 4) 2)Workforce Dev. (Bay 5) 3)Student Comm. (Bay 6)	Concurrent Sessions: 1)Governing Cmte(Bay 4) 2)Comm. Science (Bay 5) 3)iTunes U Workshop (7th Flr Brdrm 5 A/B/C)	Plenary Session: Enhancing State and Regional - Moderated (Bays 2 and 3) until 3:15pm 3:15pm Steps Forward Goodwin/Blount (Bays 2 and 3)
2:30 PM				
3:00 PM				
3:30 PM		Networking Break (Casco/Kidd/North Cape)	Break and Preparation for Tour	3:45pm Concurrent Sessions: 1)Workforce Dev. (Bay 5) 2)Energy (Bay 4)
4:00 PM				
4:30 PM				
5:00 PM		Concurrent Sessions: 1)Student Research Poster Presentations (Casco/Kidd/North Cape) 2)iTunes U Workshop (7th Flr Brdrm 5 A/B/C)	3:45 pm Lake Tour W/Research Speaker & Dinner (Meet in Bays 2 and 3 at 3:45pm)	Conference Adjourns
5:30 PM				
6:00 PM				
6:30 PM	Welcome Gathering (Bays 4 and 5)	Native American Exhibition/Dinner Keynote: Chief Allan (Bays 2 and 3)	Student-led Networking Event	
7:00 PM				
7:30 PM				
8:00 PM	Student Communication Workshop (Bay 6)			
8:30 PM				
9:00 PM				



AGENDA

Monday, October 24, 2011

8:00am - 8:00pm **Registration for All Attendees**
(Conference Event Center Hallway)

**NSF EPSCoR Project Director/Project Administrator/Education,
Outreach, and Diversity Meeting** (Bay 5)

12:00pm - 4:30pm **Lunch - Keynote**
Denise Barnes, Senior Staff Associate, EPSCoR, National Science
Foundation

6:00pm - 7:00pm **Welcome Gathering**
(light snacks - Bays 4 and 5)
Peter Goodwin, Project Director, Idaho EPSCoR

7:00pm **Dinner on your own** (except students in Communication Workshop)

7:00pm - 7:30pm **Student Poster Setup** (Casco/Kidd/North Cape Room)

7:30pm - 9:30pm **Student Communication Workshop**
(dinner provided for student participants - Bay 6)



Tuesday, October 25, 2011

6:30am - 8:30am **Registration and Breakfast Buffet** (Dockside Restaurant)

Welcome Remarks (Bays 2 and 3)

Lt. Governor Brad Little, State of Idaho

8:30am - 9:15am **Duane Nellis**, President, University of Idaho

Henry Blount, Office Head, EPSCoR, National Science Foundation

Peter Goodwin, Project Director, Idaho EPSCoR

Plenary Session: Water and Environment (Bays 2 and 3)

9:15am - 10:00am

Sharon Nunes, Vice President, Smarter Cities Strategy & Solutions,
IBM Corporation - *The Role of Information Technology in Sustaining the
World's Water Systems*

10:00am - 10:30am **Networking Break** (Casco/Kidd/North Cape Room)

Plenary Session: Water and Environment (Bays 2 and 3)

Moderator: William Michener, Director, New Mexico EPSCoR

Clifford Dahm, Professor, Aquatic Ecology, University of New Mexico
- *Science, Policy, Planning and Competing Goals in River Management*

10:30am - 12:00pm

William 'Breck' Bowden, Patrick Professor of Watershed Science
& Planning, The University of Vermont - *Opportunities in Watershed
Research Made Possible by Emerging Technologies and Approaches*

Sibel Bargu, Assistant Professor, Department of Oceanography and
Coastal Sciences, Louisiana State University - *Recent Discoveries at the
Land-Receiving Water Interface*

Lunch - Keynote (Bays 2 and 3)

12:00pm - 1:30pm

Tim Killeen, Assistant Director for Geosciences, National Science
Foundation - *Science, Engineering and Education for Sustainability (SEES)*



AGENDA

Tuesday, October 25, 2011 (continued)

Concurrent Sessions:

Water and Environment (Bay 4)

Moderator: Alex Kirby, Former BBC Environmental Correspondent
Gwen Jacobs, Professor, Systems Neuroscience, Informatics and Information Technology, Montana State University - *Enhancing the Role of EPSCoR Jurisdictions in Environmental Management through Cyberinfrastructure*
Thomas Piechota, Associate Vice President for Interdisciplinary Research, University of Nevada, Las Vegas - *The Challenge of Environmental Sustainability in Regions of Large Precipitation Variability*
Rich Loft, Director of Technology Development, Computational and Information Systems Laboratory, NCAR - *Data Challenges and the Role of HPC in Knowledge Discovery and Environmental Management*
Kathleen Bell, Associate Professor, School of Economics, University of Maine - *Getting to Water and Environment Solutions Through Sustainability Science*

1:30pm - 3:30pm

Workforce Development: Pipeline to STEM Workforce (Bay 5)

Moderator: Marta Collier, Education Outreach Director, Arkansas Science & Technology Authority
Jamai Blivin, CEO and President, Innovate-Educate - *Collective Impact in Addressing STEM Workforce Pipeline*
Steven Zipkes, Principal, Manor New Tech High School - *Unique Models That Enhance STEM Training and the Workforce*
Stephanie Smith, Vice President for Academic Affairs, Delaware Technical and Community College - *How Community Colleges are Widening Access to the STEM Pipeline through Partnership*

Student Communication Workshop (continued) (Bay 6)

AGENDA



Tuesday, October 25, 2011 (continued)

3:30pm - 4:00pm **Networking Break** (Casco/Kidd/North Cape Room)

Concurrent Sessions:

Student Research Poster Presentations

(Casco/Kidd/North Cape Room)

4:00pm - 5:30pm **Workshop - iTunes U**

(until 6:00pm - 7th Floor Boardroom 5 A/B/C)

Dan McCormack, Education Development Executive and
James Kelley, Education Technology Consultant, Apple Computer,
Inc. - *Educational Tools and Technologies for Curriculum Delivery and
Research*

Native American Exhibition/Dinner (Bays 2 and 3)

A Cultural Learning Experience

6:00pm - 8:00pm

Dinner Keynote

Chief Allan, Coeur d'Alene Tribal Chairman



AGENDA

Wednesday, October 26, 2011

6:30am - 8:30am **Breakfast Buffet** (Dockside Restaurant)

Plenary Session: Workforce Development (Bays 2 and 3)

8:30am - 10:00am Director, Office of Cyberinfrastructure, National Science Foundation
(Invited)
Tom Burnett, National Manager of Strategic Initiatives, Apple
Computer, Inc. - *New Technologies for Delivery of Resources and Training*

10:00am - 10:30am **Networking Break** (Casco/Kidd/North Cape Room)

Plenary Session: Workforce Development: Stopping the Leak in the STEM Pipeline (Bays 2 and 3)

10:30am - 12:00pm **Moderator: Gail McClure**, Arkansas NSF EPSCoR Director,
Arkansas Science & Technology Authority
Mark Wilson, State Director, Office of Curriculum, Career and
Technical Education (South Dakota), State Department of Education -
Creating a Technical Workforce
Kim Adams, Corporate Vice President, Diversity, Inclusion and Equal
Opportunity Programs, Lockheed Martin - *Reaching the Young Future
Workforce*
Dan Daly, Director, AIME, University of Alabama - *Unleashing the
Entrepreneurial Forces for Job Creation*

Lunch - Keynote (Bays 2 and 3)

12:00pm - 1:30pm **Clifford Gabriel**, Acting Director, Office of Integrative Activities, National
Science Foundation



Wednesday, October 26, 2011 (continued)

Concurrent Sessions:

EPSCoR Governing Committee Best Practices (Bay 4)

Moderator: Judith Van Houten, University Distinguished Professor,
University of Vermont

Henry Blount, Office Head, EPSCoR, National Science Foundation

Christine Smith, Executive Director, Science and Technology Advisory
Council, Rhode Island EPSCoR

Brian Noland, Chancellor, West Virginia Higher Education Policy
Commission

Jack Jekowski, Chair, New Mexico EPSCoR State Committee

Communicating Science (Bay 5)

Moderator: Susan Mason, Special Projects Section Head, OLPA/National
Science Foundation

Chris Mooney, Bestselling Science Journalist, Commentator, and Author -
Unscientific America

Alex Kirby, Former BBC Environmental Correspondent - *State of Science
Journalism*

Susan Mason, Special Projects Section Head, OLPA/National Science
Foundation - *Why Communicating Science is Essential*

Dan Agan, President, Panthera Group LLC - *Towards Better Science
Communications*

Joe Schreiber, President, Mattmar Productions - *The Science Communications
Opportunity*

Workshop - iTunes U (7th Floor Boardroom 5 A/B/C)

Dan McCormack, Education Development Executive and

James Kelley, Education Technology Consultant, Apple Computer, Inc. -
Educational Tools and Technologies for Curriculum Delivery and Research

1:30pm - 3:30pm



AGENDA

Wednesday, October 26, 2011 (continued)

3:30pm - 3:45pm **Break and Preparation for Tour**

Coeur d'Alene Lake Tour w/Research Speaker and Dinner

Meet in Bays 2 and 3 at 3:45 pm sharp

3:45pm - 6:30pm **Introductory Remarks**

Philip Cernera, Director Lake Management, Coeur d'Alene Tribe - *Lake Coeur d'Alene: Overview of Tribal Perspectives*

Dinner

6:30pm - 8:00pm **Student-led Networking Event**

AGENDA



Thursday, October 27, 2011

6:30am - 8:30am **Breakfast Buffet** (Dockside Restaurant)

Plenary Session: Energy (Bays 2 and 3)

8:30am - 10:00am **Paul Werbos**, Program Director, EFRI and ECCS, National Science Foundation - *Energy Challenges Facing the Nation and NSF Initiatives to Address Them*

Ronald Surdam, Director of the University of Wyoming Carbon Management Institute, University of Wyoming - *Energy Generation, Carbon Storage and Water Production*

10:00am - 10:30am **Networking Break** (Casco/Kidd/North Cape Room)

Plenary Session: Energy (Bays 2 and 3)

10:30am - 12:00pm **Moderator: Kristin Bowman-James**, University Distinguished Professor Chemistry; Project Director Kansas, NSF EPSCoR, The University of Kansas

Judy Wu, University Distinguished Professor, Department of Physics and Astronomy, University of Kansas - *Nanotechnology for Renewable Energy*

Alan Mantooth, Distinguished Professor, Electrical Engineering, University of Arkansas - *Evolution to Revolution: The Emerging Smart Grid in America*

Tamara Floyd Smith, Associate Professor of Chemical Engineering, Tuskegee University - *Towards Integrating Nanoparticle Enhanced Phase Change Materials (NEPCM) and Microfluidics for Thermal Management in High Heat Flux Electronics*

Lunch - Keynote: EPSCoR Enhancing State and Regional

12:00pm - 1:30pm **Economic, Educational, and Outreach Opportunities** (Bays 2 and 3)

National Science Foundation (Invited) - *Opportunities Afforded to Jurisdictions by Various NSF EPSCoR Initiatives*



AGENDA

Thursday, October 27, 2011 (continued)

Concurrent Sessions:

Plenary Session: EPSCoR Enhancing State and Regional Economic, Educational, and Outreach Opportunities (Bays 2 and 3)

This session will showcase how NSF EPSCoR science, technology, engineering and mathematics (STEM) initiatives bear on state and regional economic development enhancement, as well as educational, diversity, and outreach opportunities.

1:30pm - 3:15pm

Moderator: Peter Alfonso, Vice President for Research and Economic Development, University of Rhode Island

Karina Edmonds, Technology Transfer Coordinator, U.S. Department of Energy

Brian Noland, Chancellor, West Virginia Higher Education Policy Commission

Paul Risser, Chair and Chief Operating Officer, University Research Cabinet, University of Oklahoma; Emeritus Chancellor, Oklahoma State System of Higher Education

Lee Todd, Jr., Professor of Engineering; Former President, University of Kentucky

Student Professional Development Workshop (Bay 6)

Steps Forward (Bays 2 and 3)

3:15pm - 3:30pm

Henry Blount, Office Head, EPSCoR, National Science Foundation

Peter Goodwin, Project Director, Idaho EPSCoR



Thursday, October 27, 2011 (continued)

Concurrent Sessions:

Workforce Development: Creating an Intelligent Workforce

(Bay 5)

Moderator: Pips Veazey, Outreach Manager, Alaska EPSCoR

John Mateja, Director, McNair Scholars Program, Murray State

University - *Providing Undergraduate Research Opportunities: Why and How*

Lil Alessa, Director, The Resilience and Adaptive Management Group,

University of Alaska Anchorage - *Developing Interdisciplinary Research Programs*

Regina Schofield, Director, Corporate Engagement & Education

Outreach, Battelle - *Using Philanthropy Strategically to Support STEM*

3:45pm - 5:30pm

Energy (Bay 4)

Moderator: William Gern, Vice President for Research and Economic Development, University of Wyoming

Jon P. Christophersen, Senior Scientist, Energy Storage &

Transportation Systems, Idaho National Laboratory - *Accelerated Life*

Testing of Advanced Battery Technologies for Electric, Hybrid Electric, and Plug-In Hybrid Electric Vehicle Applications

Inanc Senocak, Assistant Professor, Mechanical & Biomedical

Engineering, Boise State University - *Multi-scale Wind Power Forecasting using a Many-core Computing Paradigm*

Moises Carreon, Assistant Professor of Chemical Engineering, University of Louisville - *Novel Membranes for Efficient CO₂ Separation*

Sumit Chaudhary, Assistant Professor, Department of Electrical and Computer Engineering, Iowa State University - *Accomplishments, Challenges, and Innovative Approaches in Organic Solar Cells*

5:30pm

Conference Adjourns - Dinner on your own

*For last minute Agenda changes please see the latest version at www.nsfepscor2011.org

PRESENTATION INDEX

A person is parasailing over a body of water. The parachute is large and colorful, with shades of pink, purple, blue, and yellow. The person is suspended in the air, holding onto the lines. In the background, there is a large, multi-story resort building with many balconies and a red roof. The building is situated on a hillside overlooking the water. In the foreground, there are several small, blue-roofed structures, possibly boat docks or storage sheds. The sky is clear and blue.

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PRESENTATION INDEX

Adams, Kim (Bio Page 26)	Corporate Vice President, Diversity, Inclusion and Equal Opportunity Programs, Lockheed Martin <i>Reaching the Young Future Workforce</i> 10/26/11 10:30am - 12:00pm (Bays 2 and 3)
Agan, Dan (Bio Page 27)	President, Panthera Group LLC <i>Towards Better Science Communications</i> 10/26/11 1:30pm - 3:30pm (Bay 5)
Alessa, Lil (Bio Page 28)	Director, The Resilience and Adaptive Management Group, University of Alaska Anchorage <i>Developing Interdisciplinary Research Programs</i> 10/27/11 3:45pm - 5:30pm (Bay 5)
Allan, Chief (Bio Page 29)	Coeur d'Alene Tribal Chairman <i>Dinner Keynote</i> 10/25/11 6:00pm - 8:00pm (Bays 2 and 3)
Bargu, Sibel (Bio Page 30)	Assistant Professor, Department of Oceanography and Coastal Sciences, Louisiana State University <i>Recent Discoveries at the Land-Receiving Water Interface</i> 10/25/11 10:30am - 12:00pm (Bays 2 and 3)
Barnes, Denise (Bio Page 31)	Senior Staff Associate, EPSCoR, National Science Foundation <i>Lunch Keynote</i> 10/24/11 12:00pm - 1:00pm (Bay 5)
Bell, Kathleen (Bio Page 32)	Associate Professor, School of Economics, University of Maine <i>Getting to Water and Environment Solutions Through Sustainability Science</i> 10/25/11 1:30pm - 3:30pm (Bay 4)
Blivin, Jamai (Bio Page 33)	CEO and President, Innovate-Educate <i>Collective Impact in Addressing STEM Workforce Pipeline</i> 10/25/11 1:30pm - 3:30pm (Bay 5)
Blount, Henry (Bio Page 25)	Office Head, EPSCoR, National Science Foundation <i>Welcome Remarks</i> - 10/25/11 8:30am - 9:15am (Bays 2 and 3) <i>EPSCoR Governing Committee Best Practices</i> - 10/26/11 1:30pm - 3:30pm (Bay 4) <i>Steps Forward</i> - 10/27/11 3:15pm - 3:30pm (Bays 2 and 3)
Bowden, William 'Breck' (Bio Page 34)	Patrick Professor of Watershed Science & Planning, The University of Vermont <i>Opportunities in Watershed Research Made Possible by Emerging Technologies and Approaches</i> 10/25/11 10:30am - 12:00pm (Bays 2 and 3)



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Burnett, Tom (Bio Page 35)	National Manager of Strategic Initiatives, Apple Computer, Inc. <i>New Technologies for Delivery of Resources and Training</i> 10/26/11 8:30am - 10:00am (Bays 2 and 3)
Carreon, Moises (Bio Page 36)	Assistant Professor of Chemical Engineering, University of Louisville <i>Novel Membranes for Efficient CO₂ Separation</i> 10/27/11 3:45pm - 5:30pm (Bay 4)
Cernera, Philip (Bio Page 37)	Director, Lake Management, Coeur d'Alene Tribe <i>Lake Coeur d'Alene: Overview of Tribal Perspectives</i> 10/26/11 3:45pm - 4:00pm (Bays 2 and 3)
Chaudhary, Sumit (Bio Page 38)	Assistant Professor, Department of Electrical and Computer Engineering, Iowa State University <i>Accomplishments, Challenges, and Innovative Approaches in Organic Solar Cells</i> 10/27/11 3:45pm - 5:30pm (Bay 4)
Christophersen, Jon P. (Bio Page 39)	Senior Scientist, Energy Storage & Transportation Systems, Idaho National Laboratory <i>Accelerated Life Testing of Advanced Battery Technologies for Electric, Hybrid Electric, and Plug-In Hybrid Electric Vehicle Applications</i> 10/27/11 3:45pm - 5:30pm (Bay 4)
Dahm, Clifford (Bio Page 40)	Professor, Aquatic Ecology, University of New Mexico <i>Science, Policy, Planning and Competing Goals in River Management</i> 10/25/11 10:30am - 12:00pm (Bays 2 and 3)
Daly, Dan (Bio Page 41)	Director, AIME, University of Alabama <i>Unleashing the Entrepreneurial Forces for Job Creation</i> 10/26/11 10:30am - 12:00pm (Bays 2 and 3)
Edmonds, Karina (Bio Page 42)	Technology Transfer Coordinator, U.S. Department of Energy <i>Enhancing State & Regional Economic, Educational, & Outreach Opportunities</i> 10/27/11 1:30pm - 3:15pm (Bays 2 and 3)
Evans, John (Bio Page 43)	President, Vermont EPSCoR State Committee <i>EPSCoR Governing Committee Best Practices</i> 10/26/11 1:30pm - 3:30pm (Bay 4)
Gabriel, Clifford (Bio Page 44)	Acting Director, Office of Integrative Activities, National Science Foundation <i>Lunch Keynote</i> 10/26/11 12:00pm - 1:30pm (Bays 2 and 3)

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Jacobs, Gwen (Bio Page 45)	Professor, Systems Neuroscience, Informatics and Information Technology, Montana State University <i>Enhancing the Role of EPSCoR Jurisdictions in Environmental Management through Cyberinfrastructure</i> 10/25/11 1:30pm - 3:30pm (Bay 4)
Jekowski, Jack (Bio Page 46)	Chair, New Mexico EPSCoR State Committee <i>EPSCoR Governing Committee Best Practices</i> 10/26/11 1:30pm - 3:30pm (Bay 4)
Kelley, James (Bio Page 47)	Education Technology Consultant, Apple Computer, Inc. <i>Educational Tools and Technologies for Curriculum Delivery and Research</i> 10/25/11 4:00pm - 5:30pm (7th Floor Boardroom 5 A/B/C) 10/26/11 1:30pm - 3:30pm (7th Floor Boardroom 5 A/B/C)
Killeen, Tim (Bio Page 48)	Assistant Director for Geosciences, National Science Foundation <i>Science, Engineering and Education for Sustainability (SEES)</i> 10/25/11 12:00pm - 1:30pm (Bays 2 and 3)
Kirby, Alex (Bio Page 49)	Former BBC Environmental Correspondent <i>State of Science Journalism</i> 10/26/11 1:30pm - 3:30pm (Bay 5)
Loft, Rich (Bio Page 50)	Director of Technology Development, Computational and Information Systems Laboratory, NCAR <i>Data Challenges & the Role of HPC in Knowledge Discovery & Environmental Mgmt</i> 10/25/11 1:30pm - 3:30pm (Bay 4)
Mantooth, Alan (Bio Page 51)	Distinguished Professor, Electrical Engineering, University of Arkansas <i>Evolution to Revolution: The Emerging Smart Grid in America</i> 10/27/11 10:30am - 12:00pm (Bays 2 and 3)
Mason, Susan	Special Projects Section Head, OLPA/National Science Foundation <i>Why Communicating Science is Essential</i> 10/26/11 1:30pm - 3:30pm (Bay 5)
Mateja, John (Bio Page 52)	Director, McNair Scholars Program, Murray State University <i>Providing Undergraduate Research Opportunities: Why and How</i> 10/27/11 3:45pm - 5:30pm (Bay 5)
McCormack, Dan (Bio Page 53)	Education Development Executive, Apple Computer, Inc. <i>Educational Tools and Technologies for Curriculum Delivery and Research</i> 10/25/11 4:00pm - 5:30pm (7th Floor Boardroom 5 A/B/C) 10/26/11 1:30pm - 3:30pm (7th Floor Boardroom 5 A/B/C)



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Mooney, Chris (Bio Page 54)	Bestselling Science Journalist, Commentator, and Author <i>Unscientific America</i> 10/26/11 1:30pm - 3:30pm (Bay 5)
Noland, Brian (Bio Page 55)	Chancellor, West Virginia Higher Education Policy Commission <i>EPSCoR Governing Committee Best Practices</i> 10/26/11 1:30pm - 3:30pm (Bay 4) <i>Enhancing State & Regional Economic, Educational, & Outreach Opportunities</i> 10/27/11 1:30pm - 3:15pm (Bays 2 and 3)
Nunes, Sharon (Bio Page 56)	Vice President, Smarter Cities Strategy & Solutions, IBM Corporation <i>The Role of Information Technology in Sustaining the World's Water Systems</i> 10/25/11 9:15am - 10:00am (Bays 2 and 3)
Piechota, Thomas (Bio Page 57)	Associate Vice President for Interdisciplinary Research, University of Nevada, Las Vegas <i>The Challenge of Environmental Sustainability in Regions of Large Precipitation Variability</i> 10/25/11 1:30pm - 3:30pm (Bay 4)
Risser, Paul (Bio Page 58)	Chair and Chief Operating Officer, University Research Cabinet, University of Oklahoma; Emeritus Chancellor, Oklahoma State System of Higher Education <i>Enhancing State & Regional Economic, Educational, & Outreach Opportunities</i> 10/27/11 1:30pm - 3:15pm (Bays 2 and 3)
Schofield, Regina (Bio Page 59)	Director, Corporate Engagement & Education Outreach, Battelle <i>Using Philanthropy Strategically to Support STEM</i> 10/27/11 3:45pm - 5:30pm (Bay 5)
Schreiber, Joe (Bio Page 60)	President, Mattmar Productions <i>The Science Communications Opportunity</i> 10/26/11 1:30pm - 3:30pm (Bay 5)
Senocak, Inanc (Bio Page 61)	Assistant Professor, Mechanical & Biomedical Engineering, Boise State University <i>Multi-scale Wind Power Forecasting using a Many-core Computing Paradigm</i> 10/27/11 3:45pm - 5:30pm (Bay 4)
Smith, Christine (Bio Page 62)	Executive Director, Science and Technology Advisory Council, Rhode Island EPSCoR <i>EPSCoR Governing Committee Best Practices</i> 10/26/11 1:30pm - 3:30pm (Bay 4)
Smith, Stephanie (Bio Page 63)	Vice President for Academic Affairs, Delaware Technical and Community College <i>How Community Colleges are Widening Access to the STEM Pipeline through Partnership</i> 10/25/11 1:30pm - 3:30pm (Bay 5)

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Smith, Tamara Floyd (Bio Page 64)	Associate Professor of Chemical Engineering, Tuskegee University <i>Towards Integrating Nanoparticle Enhanced Phase Change Materials (NEPCM) and Microfluidics for Thermal Management in High Heat Flux Electronics</i> 10/27/11 10:30am - 12:00pm (Bays 2 and 3)
Surdam, Ronald (Bio Page 65)	Director of the University of Wyoming Carbon Management Institute, University of Wyoming <i>Energy Generation, Carbon Storage and Water Production</i> 10/27/11 8:30am - 10:00am (Bays 2 and 3)
Todd Jr., Lee (Bio Page 66)	Professor of Engineering; Former President, University of Kentucky <i>Enhancing State & Regional Economic, Educational, & Outreach Opportunities</i> 10/27/11 1:30pm - 3:15pm (Bays 2 and 3)
Werbos, Paul (Bio Page 67)	Program Director, EFRI and ECCS, National Science Foundation <i>Energy Challenges Facing the Nation and NSF Initiatives to Address Them</i> 10/27/11 8:30am - 10:00am (Bays 2 and 3)
Wilson, Mark (Bio Page 68)	State Director, Office of Curriculum, Career and Technical Education (South Dakota), State Department of Education <i>Creating a Technical Workforce</i> 10/26/11 10:30am - 12:30pm (Bays 2 and 3)
Wu, Judy (Bio Page 69)	University Distinguished Professor, Department of Physics and Astronomy, University of Kansas <i>Nanotechnology for Renewable Energy</i> 10/27/11 10:30am - 12:00pm (Bays 2 and 3)
Zipkes, Steven (Bio Page 70)	Principal, Manor New Tech High School <i>Unique Models That Enhance STEM Training and the Workforce</i> 10/25/11 1:30pm - 3:30pm (Bay 5)



SPEAKER BIOS

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SPEAKER BIOS

Henry Blount

Office Head, EPSCoR

National Science Foundation

Henry Blount directs the National Science Foundation's Experimental Program to Stimulate Competitive Research (EPSCoR). EPSCoR is a state-based program designed to fulfill the NSF's mandate to promote scientific progress nationwide. The EPSCoR program directs its resources at those states that have historically received lesser amounts of NSF Research funding. Through this program, NSF facilitates partnerships among government, higher education and the private sector that are designed to effect lasting improvements in a state's or region's research infrastructure, R&D capacity and hence, its national R&D competitiveness.

Prior to being named Director of NSF EPSCoR, Blount served as Head of the Office of Multidisciplinary Activities in NSF's



Directorate for Mathematical and Physical Sciences and in numerous other leadership positions during his nearly thirty- year career at the Foundation. He received the B.S. in Chemistry from the University of North Carolina and the Ph.D. in Chemistry from the University of Georgia. He was a Research Associate and Teaching Fellow

in Chemistry at Case Western Reserve University. Prior to joining NSF, Blount was a member of the faculty of the University of Delaware. In 1984, he moved from his position as Professor and Director of Graduate Studies in Chemistry at the University of Delaware to the Foundation as Program Director for Chemical Analysis.

He is a Fellow of the American Association for the Advancement of Science.



SPEAKER BIOS

Kim Adams

Corporate Vice President

Diversity, Inclusion and Equal Opportunity Programs

Lockheed Martin

Kimberly (Kim) S. Adams is Corporate Vice President, Diversity, Inclusion and Equal Opportunity Programs for Lockheed Martin.

Since joining Lockheed Martin in 1998, Ms. Adams has held a number of positions of increasing responsibility including Vice President, Human Resources for Enterprise Operations; Vice President, Human Resources and Communications at Sandia National Laboratories; Vice President, Human Resource Operations for Lockheed Martin Integrated Systems and Solutions; and Vice President, Human Resources and Security Operations for Lockheed Martin Management and Data Systems.

Before joining Lockheed Martin, Ms. Adams worked as a human resources consultant for Fortune 500 organizations concentrating



on talent acquisition and development. She has more than 25 years of human resources leadership experience in several industries including healthcare, engineering and technology, and aerospace.

Ms. Adams is active in the community and serves on several boards of directors including Innovate+Educate, where she is currently the Vice-Chair, and the American Cancer Society National Capital Region Corporate Council.

A native of Kansas City, Missouri, Ms. Adams is a graduate of Park College, where she received a bachelor's degree in business administration. She earned a master's degree in management from the University of Maryland University College.

SPEAKER BIOS



Dan Agan
President
Panthera Group LLC



Panthera was founded by former network television and software executive Dan Agan, who serves as its President and lead consultant. He brings to Panthera more than 20 years of success in developing, articulating and executing winning business strategies. An accomplished executive, he is widely lauded for producing results by aligning creative thinking with hard-core business strategies. His broad-based industry experience includes executive management roles with the Public Broadcasting Service (PBS) where he served as senior vice President of National Programming and Marketing, Senior Vice President of Worldwide Marketing for Excalibur Technologies, and Senior Vice President/Chief Marketing Officer for Convera Corporation.

Under his marketing leadership, Excalibur Technologies vaulted from a virtually unknown player in the search software market to the #2 brand, enjoyed an 80% compound annual growth rate in product revenue, brought new products to market, developed new and deeper ties with the investment community, and developed programs that saw overseas

revenue swell by 70%. In 1999, he played a key role in Excalibur's merger with a division of Intel Corporation, forming a new company, Convera Corporation.

Dan stepped into private practice with the formation of Panthera Group LLC to help companies identify and implement effective marketing and communications strategies. Panthera assignments have addressed an array of client needs including brand development, strategic market planning, pricing, television sponsorship strategy and production, IPTV (internet protocol television) channel design and strategy, business planning, affinity marketing and demand generation.

Frequently sought as a speaker on IPTV, marketing, television and entrepreneurship, Dan also is a contributing author to the book *Broadcast Advertising and Promotion*. He is an award-winning copywriter, and has been a keynote speaker or guest lecturer for the Harvard University Graduate School of Business, the MIT Enterprise Forum, the University of Wisconsin, George Washington University and the University of Florida.



SPEAKER BIOS

Lil Alessa

Director, The Resilience and Adaptive Management Group
University of Alaska, Anchorage

Lilian Na'ia Alessa is a Professor of Biological Sciences at the University of Alaska Anchorage and heads the Resilience and Adaptive Management Group at UAA. She currently conducts extensive research on human adaptation to climate change, funded by the National Science Foundation, including International Polar Year projects such as the Indigenous Arctic Observing Network. Canadian-born and



raised, Alessa holds a Ph.D. in cell biology from the University of British Columbia and has extensive training in cognitive psychology. Lil's expertise is in the conceptual development and application of complex systems thinking, social ecological complexity, and development of research strategies.



Chief Allan

Coeur d'Alene Tribal Chairman

Chief James Allan was born in Spokane, Washington in 1972. He grew up on the Coeur d'Alene Indian Reservation, with one brother and four sisters and a large extended family. In 1991, Chief graduated from Lakeside High School and was the first in his family to go to college. He attended Eastern Washington University in Cheney, Washington, where he received his BA in Political Science in 1996. Chief understands the commitment that it takes to fulfill educational goals and encourages Indian students to make the commitment to complete higher education.

After graduating from college, Chief was hired by Coeur d'Alene Tribal Chairman Ernie Stensgar as a legislative assistant. He later served as the Legislative Director for the Tribe until he accepted a position as Legislative Associate with the National Congress of American Indians (NCAI) in 2000 and moved to Washington, DC. While employed in his capacity within the legislative arena, Chief was able to navigate the complex world of public policy. In 2001, Chief was called back by his Tribe to serve as the Administrative Director. His diverse responsibilities included oversight



of 19 Tribal departments made up of over 300 employees, and a budget nearing \$10 million.

In 2003, Chief was elected to the Coeur d'Alene Tribal Council and the following year, was elected to serve as the Vice-Chairman for the Coeur d'Alene Tribe. The trials and tribulations of serving as an elected official did not discourage Chief from maintaining a high level of motivation to complete public service with integrity. Despite his many commitments while holding public office, he continued his responsibilities as Administrative Director until May of 2005, when Chief was elected to the position of Chairman.

In his tenure as Chairman of the Coeur d'Alene Tribal Council, Chief's responsibilities include leadership decisions that guide the direction the Tribe takes regarding cultural, historical, and contemporary resources of the Tribe—including a thriving multi-million dollar Tribal economy. Today the Coeur d'Alene Tribe is an economic powerhouse in the region, providing over 3,900 jobs, and over 308 million dollars in direct and indirect sales activities through various enterprises and government operations.



SPEAKER BIOS

Sibel Bargu

Assistant Professor

Department of Oceanography and Coastal Sciences

Louisiana State University

Dr. Sibel Bargu is mainly trained as a biological oceanographer, with special interests in ecological issues related to estuarine and marine plankton ecology. Her advanced training began as a biologist. She graduated from the biology department at Istanbul University, in Turkey.

After her graduation, Dr. Bargu was accepted into the graduate program at the University of California, Santa Cruz campus (UCSC), where she completed her Masters degree on the trace metal affinities of marine diatoms. She then switched directions slightly to work on the ecology of toxic algal blooms for her Ph.D. For her doctoral research, she focused on how the diatom toxin, domoic acid, is transferred through the food chain via herbivorous vectors such as krill in coastal upwelling systems.

Dr. Bargu is currently employed at the Department of Oceanography and Coastal Sciences, Louisiana State University (LSU) as an Assistant Professor. She finds the shelf waters of Louisiana as some of the best-studied examples of the detrimental effects



of coastal eutrophication and their consequences, including harmful algal blooms and hypoxia. Therefore, her research interests at LSU focuses on food-web ecology, the impacts of anthropogenic effects (i.e., nutrient loading and predator loss), and on marine contaminants and phycotoxins in aquatic food webs. Together with her

students, she is investigating both marine and freshwater toxins, petroleum-based hydrocarbon accumulation and tissue distributions in higher trophic levels, as well as organisms' physiological stress and possible adaptations following exposure to these compounds, using different stress biomarkers.

During the years, Dr. Bargu has come to greatly enjoy teaching and mentoring undergraduate and graduate students. She has taught a wide variety of biology courses, including ecology-oriented ones, as well as classes focused on aquatic systems, including biological oceanography and harmful algal blooms.

SPEAKER BIOS



Denise Barnes
Senior Staff Associate
National Science Foundation

Dr. Denise M. Barnes is a Senior Staff Associate, Experimental Program to Stimulate Competitive Research (EPSCoR) with the National Science Foundation. Prior to this, Denise was Vice President of New Business Development for the Telecommunications and Electronics Markets with ITECS-Innovative. Past experience also includes Adjunct Professor of Chemistry at Spelman College in Atlanta, GA., and Vice President of New Product Development, Amalan Networks. In this role, Dr. Barnes was accountable for the emerging services business. Previously, Dr. Barnes held the position of Vice President of the Optical Connectivity Division Unit



for OFS (formerly Lucent Technologies). Dr. Barnes holds an AB in Chemistry from Vassar College and a Ph.D. in Chemistry from Brown University. She has also completed SMU's Executive MBA Program. Dr. Barnes is the Immediate Past Chairman of the Executive Board of the National Organization for the Professional Advancement of Black Chemists and Chemical Engineers. She has also served as a Board member of Georgia Industrial Fellowship for Teachers (GIFT), an organization that is focused on enhancing the technical skills of science and math teachers.



SPEAKER BIOS

Kathleen Bell

Associate Professor, School of Economics
University of Maine

Associate Professor Kathleen Bell specializes in environmental and public economics and spatial economic modeling. She is particularly interested in the spatial aspects of economic decisions, the linkages between economic, social, and environmental systems, and the application of interdisciplinary research approaches to address environmental issues.



Dr. Bell received her B.A. in Economics and Environmental Studies from Bowdoin College in 1990 and her Ph.D. in Economics from the University of Maryland in 1997. Prior to joining the faculty at University of Maine in 2001, she worked as a senior economist at the US Environmental Protection Agency in Washington, DC and as a postdoctoral research associate at the University of Washington, Seattle.

She joined the faculty at the University of Maine in 2001, where she conducts research on a variety of environment, public policy, and community economic development topics and teaches economics, public policy, statistics, GIS, and sustainability science courses. Much of her

research examines land markets and the interactions between land-use change, markets, and environmental quality. Bell's research interests include the modification of conventional models of decisions to incorporate heterogeneity over space, the modeling of coupled social and biophysical systems, and the use of GIS and other technologies to support private

and public decision-making. Current research projects focused on water and environment themes include studies of lake management, river restoration, vernal pools, and private drinking water wells.

Dr. Bell is a core member of University of Maine's NSF EPSCoR Research Team. As an active member of Maine's Sustainability Solutions Initiative, she is studying effective applications of research to achieve sustainable development goals. Her recent sustainability science research adds to her extensive interdisciplinary research experience that includes contributions to major projects completed in the Chesapeake Bay and Pacific Northwest regions of the United States.

SPEAKER BIOS



Jamai Blivin CEO and President Innovate+Educate



Jamai Blivin is the President and CEO of Innovate+ Educate CEO of the NM STEM Network. In 2009, Jamai approached Jami Grindatto of Intel Corporation to launch the non-profit, believing that industry alignment for STEM and workforce development was critical to solve the issues the U.S. faces to develop an innovation economy. Jami agreed to form the organization and the first board meeting was held in New Mexico in April 2009. Since that time, Innovate+Educate has become a leading voice across states for industry alignment to advance STEM education.

Jamai has consulted and worked extensively with State programs, IT Companies, Higher Ed Institutions, and K-12 Systems to promote STEM education and industry partnerships in STEM.

Blivin spent 17 years in the investment banking field before retiring to pursue her passion for education and industry partnerships. After middle school substitute teaching in Little Rock, Arkansas and Durham, North Carolina for five years, she assumed the position as Education Foundation Director at the North Carolina Technology Association in Raleigh, NC and led the education efforts statewide to advance STEM education with industry partners. She returned

to Santa Fe in 2008 (where she grew up) to take a position at NMSU under the New Mexico Learning Network, serving as Outreach Director before launching Innovate+Educate.

Jamai is a frequent speaker at industry conferences and educational conferences sharing her passion and vision for

meaningful industry partnerships to advance STEM and workforce development at the State level. Since she launched I+E, she has been a speaker at events for the U. S. Department of Education, Intel Corporation's Visionary Conference, the National Governor's Association Center for Best Practices STEM, the Council of State Governments, and the Massachusetts' STEM Council convening to launch the STEM public-private partnership in Massachusetts. In 2010, Innovate+ Educate was nominated for and received the New Mexico Business Weekly's "Small Business Heavyweights" award for their success in developing the first public-private partnership in New Mexico to advance STEM and workforce.

Jamai holds a BSBA and MBA in Finance from the University of Arkansas. She resides with her husband and children in Santa Fe, New Mexico. She gardens in her spare time.



SPEAKER BIOS

William 'Breck' Bowden

Patrick Professor of Watershed Science & Planning
The University of Vermont

Dr. Bowden is the Robert and Genevieve Patrick Professor in Watershed Science and Planning in the Rubenstein School of Environment and Natural Resources at the University of Vermont. He teaches undergraduate courses in the Environmental Sciences curriculum and graduate courses in the Aquatic of Ecology and Watershed sciences curriculum at the University of Vermont. He is the Director of the Vermont Water Resources in Lake Studies Center and leads the Vermont component of the Northeastern States Research Cooperative. In addition he is the Chair of the Technical Advisory Committee for the Lake Champlain Basin Program.

Dr. Bowden's research interests focus on the interactions among land use, land cover, and water resources. He has conducted research on wetland, terrestrial, and aquatic ecosystems in temperate, tropical, and arctic biomes and has been involved with strategic planning in universities and in government agencies. He founded the Water Resources Management undergraduate and graduate



programs at the University of New Hampshire and helped to establish the Natural Resources M.S. and Ph.D. programs there. He established the national Integrated Catchment Management Program at Landcare Research in New Zealand as the lead Project Manager and Team Leader. His current research projects focus on the effects of exurban development on stormwater runoff in Vermont and on climate change impacts in the arctic.

Dr. Bowden is active in national and international programs to that seek to integrate science in resource management decision making, including the Long-Term Ecological Research (LTER) program, Hydrology for Environment Life and Policy (HELP), the National Environmental Observatory Network (NEON), and the Study of Environmental Arctic Change (SEARCH). Dr. Bowden received his B.S. with majors in Zoology and Chemistry from the University of Georgia (1973) and his M.Sc. (1976) and Ph.D. (1982) from the University of North Carolina.

SPEAKER BIOS



Tom Burnett

National Manager of Strategic Initiatives
Apple Computer, Inc.

Tom Burnett is the Manager of Strategic Initiatives for Apple Computer, Inc. in Austin, Texas. He was also Vice President for Product and Business Development at Articulate Inc.

Tom received his Ph.D. in General School Administration with an emphasis in Computer Science and Educational Research and Statistics from The University of Missouri-Columbia; he also received his M.A. and B.S. degrees from the University of Missouri-Columbia.



He has taught in the College of Education at the University of Texas at Austin, the University of Nebraska-Lincoln, the University of Missouri-Kansas City, the University of Missouri-Columbia, and Lee's Summit High School in Kansas City, Missouri. He has also served as Executive Director of Technology Services for the Austin Independent School District and Director of Technology for the Independence Missouri School District.



SPEAKER BIOS

Moises Carreon

Assistant Professor of Chemical Engineering
University of Louisville

Dr. Moises A. Carreon was born in Morelia, Mexico in 1974. He received his Bachelor's degree in Chemical Engineering at Universidad Michoacana in Mexico 1996, where he also received his Master's Degree in Materials Science and Engineering in 1999. He obtained his Ph.D. in the Department of Chemical & Materials Engineering at the University of Cincinnati in 2003 under the supervision of Professor Vadim V. Gulians. From 2004-2005 he worked as a postdoctoral fellow in the Chemistry Department at University of Toronto under the supervision of Geoffrey A. Ozin. From 2006-2007 he worked as a Research Associate in the Chemical & Biological Engineering Department at University of



Colorado-Boulder under the supervision of John L. Falconer. Since Fall 2007, he is Assistant Professor in the Chemical Engineering Department at University of Louisville.

His research centers on the molecular engineering of ordered periodic porous transition metal oxides materials, zeolite and metal organic framework membranes for heterogeneous catalysis and molecular gas separations. Professor Carreon has more than 35 refereed publications, including four book chapters, and is the recipient of the prestigious NSF-CAREER award (2011-2016).

SPEAKER BIOS



Phillip Cernera

Director Lake Management
Coeur d'Alene Tribe

Born and raised on Long Island, New York, Mr. Cernera was educated at the University of Idaho. In 1982, Mr. Cernera started his formal career as a Fisheries Scientist working on Russian and Japanese fishing boats in the Bering Sea.

After two years of this work he became a Fisheries Scientist for the ShoBan Tribe of Idaho. After seven years of conducting salmon research and habitat restoration in the Salmon River drainage with the ShoBans he became an Environmental Scientist for a Seattle based firm. This work kept him in Idaho working on water rights in the Clearwater drainage.

After three years as a consultant he took a job as Superfund Program Manager and Restoration Coordinator for the Coeur



d'Alene Tribe.

Now after nearly 20 years with the Tribe, Mr. Cernera acts as Director of the Tribe's Lake Management Department. The programs he administers include: Recreation Management, Shoreline Protection, Water Resources Management, and Hazardous Waste Management.

Mr. Cernera also has been appointed by the Tribal Council to sit on the Basin Environmental Improvement Project Commission (that oversees the implementation of EPA's \$2 billion Bunker Hill Superfund clean) the Coeur d'Alene Basin NRDA Trustee Council (in charge of NRDA restoration settlement funds exceeding \$120 million) and the National Tribal Water Council (that provides guidance to EPA on national tribal issues).



SPEAKER BIOS

Sumit Chaudhary

Assistant Professor

Department of Electrical and Computer Engineering

Iowa State University

Dr. Sumit Chaudhary is Northrop Grumman Assistant Professor in the Department of Electrical and Computer Engineering at Iowa State University, with a courtesy appointment in the Department of Materials Science and Engineering. He received his Ph.D. degree in Electrical Engineering from University of California at Riverside in 2006, where he also received Graduate Research Award for excellence in doctoral research. He received his Bachelor of Technology degree from Institute of Technology, Banaras Hindu University, India in 2001.



His current research interests are in the areas of organic electronic and nanoelectronic materials and devices - especially design, fabrication and characterization of more efficient and stable organic and hybrid organic-inorganic solar cells. He has published several research papers in these areas and holds one U.S. patent. His research also has been featured in news by American Institute of Physics, American Chemical Society, and Wiley-VCH materialsviews.com. Prof. Chaudhary is a recipient of a 2011 National Science Foundation CAREER Award.

SPEAKER BIOS



Jon P. Christophersen

Senior Scientist, Energy Storage & Transportation Systems
Idaho National Laboratory



Dr. Jon P. Christophersen received a B.S. and M.S. in electrical engineering from the University of Idaho (Moscow, ID) in 1999 and 2005, respectively, and a Ph.D. from Montana State University (Bozeman, MT) in electrical engineering in May 2011. He has been a research engineer with the Energy Storage and Transportation Systems Department at the Idaho National Laboratory in Idaho Falls, ID since February 2000. He has lead responsibility for all high power cell testing, analyses, and reporting under the Department of Energy's Applied Battery Research and Technology Life Verification Testing Programs, as well as various battery and ultracapacitor manufacturer deliverables as part of the U.S. Advanced Battery Consortium (USABC) Program.

His work activities include the investigation and successful implementation of novel testing profiles and procedures, developing

new analysis techniques, developing and validating various life predictive modeling and prognostic tools, and coordinating complex testing and analyses between various national laboratories. His research interests include battery life prognostics and state-of-health estimation. His doctoral dissertation was focused on state-of-health

assessment for energy storage devices using near real-time impedance spectrum measurements under both no-load and load conditions. He received an R&D 100 Award in 2011 for the Impedance Measurement Box, which offers innovative breakthroughs on rapid impedance measurement techniques for onboard monitoring of energy storage devices. He has authored or co-authored over 15 peer-reviewed journal publications. He also has one patent, several patents pending, and numerous conference proceedings papers and presentations related to energy storage.



SPEAKER BIOS

Clifford Dahm

Professor, Department of Biology
University of New Mexico

Dr. Dahm is an ecosystem ecologist with expertise in restoration ecology, biogeochemistry, microbial ecology, hydrology, climatology and aquatic ecology. He has been on loan the past three years to the U.S. Geological Survey in Sacramento, California to serve as lead scientist for the Delta Science Program and has just returned to the University of New Mexico where he is a professor in the Department of Biology. He emphasizes interdisciplinary approaches required for understanding aquatic ecosystems. He has served as interim director for the Sevilleta Long-Term Ecological Research (LTER) Program at



the Sevilleta National Wildlife Refuge in central New Mexico and director for the Freshwater Sciences Interdisciplinary Doctoral Program at UNM. He has served as a program director for the Division of Environmental Biology of the National Science Foundation. He has worked on river restoration, flow criteria, and adaptive management protocols in Florida, Queensland-Australia, New Mexico, and California. Dr. Dahm received a B.S. in chemistry from Boise State University, a M.A. in chemical oceanography from Oregon State University, and a Ph.D. in aquatic ecology and oceanography from Oregon State University.



Dan Daly

Director, Alabama Innovation & Mentoring of
Entrepreneurs Center
University of Alabama

Dr. Dan Daly received B.S. in Chemistry and Psychology from Florida State University, Tallahassee, FL. He went on to receive a Ph.D. in Physical-Organic Chemistry from the University of Florida in Gainesville, Florida. He did two post-doctoral studies at The University of South Florida in Tampa, Florida and Oregon State University in Corvallis, Oregon in computer-assisted molecular design. Dr. Daly is currently the Director of the Alabama Institute for Manufacturing Excellence. He has 17 years experience in the fuel and lubricant businesses were



he served as Technology and Business Development Manager. He has led the development of several commercially successful projects and has managed and coordinated fundamental programs at several universities and national laboratories. Dr. Daly has won several awards for this work including: Nortech Top 50 Industrial Innovation Award for Northeast Ohio; Recipient, R&D Magazine Top 100 Industrial Innovation Awards Recipient; and ACS Environmental Industrial Innovation Award.



SPEAKER BIOS

Karina Edmonds

Technology Transfer Coordinator
U.S. Department of Energy

Dr. Karina Edmonds was appointed Technology Transfer Coordinator for the U.S. Department of Energy (DOE) in April 2010 by Secretary of Energy Dr. Steven Chu. Dr. Edmonds is responsible for working with the Department's National Laboratories to accelerate the process of moving discoveries from the laboratory to the private sector.

Prior to DOE, she served as Director of the Jet Propulsion Laboratory (JPL) Technology Transfer. While at JPL, her responsibilities included licensing technologies developed



at both JPL and the California Institute of Technology to industry and start-ups, managing the JPL patent portfolio, assisting Caltech start-ups, and managing prosecution of Caltech's patent filings. Prior to her work at JPL, she worked as Principal Investigator at Northrop Grumman for internal research and development efforts.

Dr. Edmonds received a bachelor's degree in Mechanical Engineering from the University of Rhode Island. She holds master's and doctoral degrees in Aeronautics from Caltech and is a registered patent agent with the USPTO.

SPEAKER BIOS

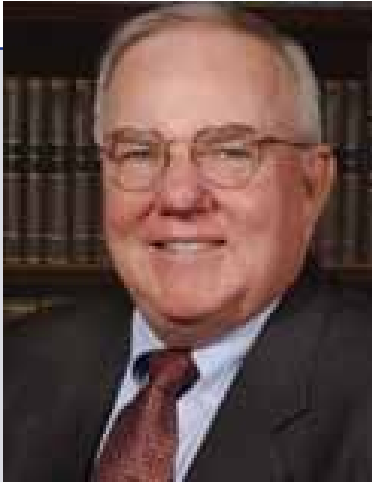


John Evans

President

Vermont EPSCoR State Committee

Dr. John Evans is currently Senior Advisor to the President of the University of Vermont and President of the Vermont Technology Council. Since joining the university in 1976, Dr. Evans has held numerous leadership positions, including Dean of the College of Medicine. He formalized the technology transfer process for the College of Medicine. In his capacity as Senior Advisor to the President, Dr.



Evans is responsible for the Office of Technology Commercialization, working to identify and maximize commercialization opportunities for faculty, student, and staff innovation. He works closely with senior administrators enhancing UVM's community relations encouraging the commercialization of research and investment in the economic vitality of the State of Vermont.



SPEAKER BIOS

Clifford Gabriel

Acting Director, Office of Integrative Activities
National Science Foundation

Dr. Clifford J. Gabriel is Senior Advisor in the Office of the Director of the National Science Foundation (NSF). He is currently serving as acting Director of the Office of Integrative Activities. In these positions, he provides policy guidance on a range of issues including the Foundation's treatment of potentially transformative and interdisciplinary research as well as merit review. From 2005 to 2007, he was Director of the Office of Science Coordination and Policy in the Environmental Protection Agency's Office of Prevention, Pesticides, and Toxic Substances, where he was responsible for the Agency's Endocrine Disruptor Screening Program, the Science Advisory Panel (a standing external panel of scientists tasked to review EPA's science activities), and policy development in areas such as biotechnology and toxicity testing. He served as Deputy Associate Director for Science in the Office of Science and Technology Policy (OSTP) from 1996 to 2005. In this position, he helped shape federal science policy in the physical, life, and social sciences. In particular, Dr. Gabriel handled issues for OSTP related to agricultural biotechnology, animal and plant health, food safety, genomics, pesticides, Gulf War veterans' illnesses, and dioxin. Dr. Gabriel was Executive Director



of the American Institute of Biological Sciences from 1993 to 1996. As Executive Director, he was responsible for all operations of the Institute including publications, contracts and grants, annual meetings, and public policy. From 1990 to 1993, Dr. Gabriel was Principal Plant Pathologist with the United States Department of Agriculture's Cooperative State Research Service (USDA's extramural R&D funding agency). In this position,

he was responsible for interactions between the USDA and departments of plant pathology in land-grant universities. Dr. Gabriel was a Senior Program Officer at the National Research Council from 1986-1990. As Senior Program Officer, he conducted science policy studies on diverse topics including forestry, biological control in managed ecosystems, opportunities in biology, microbial ecology; and environmental use of genetically-engineered organisms. From 1983 to 1986, Dr. Gabriel was a Research Plant Pathologist with the USDA's Agricultural Research Service (USDA's intramural R&D funding agency). He conducted research on plant viruses and other pathogens of exotic plant germplasm. Dr. Gabriel received his Ph.D. in plant pathology from the University of Wisconsin-Madison in 1983 and is a fellow of the American Association for the Advancement of Science.

SPEAKER BIOS



Gwen Jacobs

Professor

Systems Neuroscience, Informatics and Information Technology
Montana State University



Dr. Jacobs received her undergraduate training in Human Anatomy and Physiology from UC Berkeley, a Masters Degree in Physiology from UC Davis and her Ph.D. in Neuroscience from SUNY Albany. She was on the faculty at UC Berkeley for 15 years prior to taking her current position at Montana State University where she is a Professor of Neuroscience, Assistant Chief Information Officer and Director of Research Computing. In addition to her faculty role, she directs the Howard Hughes Undergraduate Biology Program (2002 – 2014) and directs research computing initiatives for her campus, promoting the development of sustainable research infrastructure.

Dr. Jacobs maintains an active research program funded by NSF and NIH in three areas of research: systems neuroscience, informatics and cyberinfrastructure. Recently, she led the Lariat Networking Project, an effort to upgrade the physical network infrastructure in six rural state institutions thereby improving the research competitiveness and collaborative activities of scientists at those institutions. Her

current research efforts are focused on developing tools and approaches for data management and informatics including the Yogo Data Management Framework and the Virtual Observatory and Ecological Informatics System.

At the national level she has been engaged in science policy for many years serving

on the NSF Biological Sciences Advisory Committee, the NIH National Advisory Research Resources Council and the NSF TeraGrid Science Advisory Board. Currently she chairs the Neuroimaging and Neuroinformatics Study Section at NIH and serves on the Pacific Northwest Gigapop Advisory Board, Internet2 Governance and Nominations Committee, the Research Channel Board, and chairs the Board of Directors for the NSF IPlant Collaborative.

Dr. Jacobs is currently on leave from Montana State University serving as Interim Director of Cyberinfrastructure at the University of Hawai'i, working with Dr. David Lassner on information technology initiatives throughout the islands.



SPEAKER BIOS

Jack Jekowski

Chair

New Mexico EPSCoR State Committee

John P. (Jack) Jekowski is a founding Principal Partner of Innovative Technology Partnerships, LLC (ITP). Incorporated in 1997, ITP is a veteran-owned technology and management consulting company specializing in national security. Mr. Jekowski oversees the Strategic and Scenario Planning business line for ITP. His recent work has included development of long range strategic and scenario plans for the National Nuclear Security Administration's (NNSA) Office of Secure Transportation (OST), Sandia National Laboratories' Nonproliferation and Assessments Strategic Management Unit and Safeguards & Security Directorate, the DOE National Training Center, Lawrence Livermore National Laboratory, Honeywell FM&T, the New Mexico Public Television network, the Regional Development Corporation, and the NSF Long Term Ecological Research Network.

Previously, Mr. Jekowski was director for strategic planning, business development, and government relations for Honeywell Federal Manufacturing & Technologies (FM&T), the largest non-nuclear manufacturing facility



in the Department of Energy nuclear weapons complex.

Mr. Jekowski's recent work has focused on long range scenario planning with the DOE, NNSA and the national laboratories, examining the national and global security environment in a post-9/11 world, with a focus on nonproliferation and arms control. Areas of research

have included the future of science, global security, nonproliferation, energy and the environment, weapons of mass destruction, and the implications of national security policy on arms control agreements.

Mr. Jekowski also serves on a number of statewide public policy, education, economic development and science and technology boards. These include chair of the NSF EPSCoR New Mexico statewide advisory committee, working with the six four-year universities and community colleges to enhance research infrastructure in New Mexico. Mr. Jekowski is a senior member of the Institute for Nuclear Materials Management and chairs the Institute's Strategic Planning Committee.

SPEAKER BIOS



James Kelley

Education Technology Consultant
Apple Computer, Inc

Dr. Kelley is currently an Education Technology Consultant for Apple in the Deep South Education Region that includes Alabama, Georgia, Kentucky, Louisiana, Mississippi and Tennessee. He is responsible for developing and supporting innovative educational technology initiatives (K-16 and beyond) in those states. He has been with Apple for over eighteen years and spent two years at corporate managing the Apple Adult Education and Literacy Group before returning to his home state, Tennessee.

Dr. Kelley is a former classroom teacher, school principal and administrator for Metro-Nashville Public Schools. His doctoral degree was earned at George Peabody College of Vanderbilt University. He has been an adjunct faculty member for Vanderbilt, Trevecca and Tennessee State University.

Before coming to Apple, Dr. Kelley was Assistant Commissioner of Education for



the Tennessee Department of Education where he was responsible for overseeing the development and implementation of high quality curricula in all subject areas from preschool to adult. Prior to assuming that position, he was the State's first Director of Technology and was responsible for the development and

implementation of Tennessee's initial statewide technology initiative, "Computer Skills Next."

Dr. Kelley lives in Goodlettsville, Tennessee with his wife, Janice, they have four children. Jennifer, their oldest, is a kindergarten teacher and is Cooper and Campbell's mom...Andy, the oldest son, has returned to China where he teaches American and English Literature at Henan University...Jon, the middle son, is a Technology Support Specialist at Ensworth High School in Nashville...Josh, the youngest, is a senior at Tennessee Tech. They are his joy and inspiration for living.



SPEAKER BIOS

Tim Killeen

Assistant Director for Geosciences
National Science Foundation

Timothy Killeen was appointed NSF's Assistant Director for the Geosciences in July 2008. In this role, he oversees the Geosciences Directorate (GEO), which supports research in the atmospheric, earth and ocean sciences including climate processes and changes, the water cycle, and natural disasters such as earthquakes, tsunamis and severe storms.

Prior to this appointment, he served as director of the National Center for Atmospheric Research (NCAR) since 2000. Before that, he was Professor of Atmospheric, Oceanic and Space Sciences, Associate Vice President for Research, and



Director of the Space Physics Research Laboratory at the University of Michigan. He has held leadership roles in the geosciences for many years, including chairing numerous national committees and advisory panels. He was president of the American Geophysical Union for two years, 2006-2008, and is a member of the National

Academy of Engineering. His research interest is in satellite measurements and modeling of the upper atmosphere. He holds a doctorate in Atomic and Molecular Physics and a B.S. and DSc from University College London.

SPEAKER BIOS



Alex Kirby

Former BBC Environmental Correspondent

Alex Kirby was a BBC News environment correspondent for 15 years, reporting first for radio and then for television, and finally for the BBC News website. He now freelances and works with journalists from the



South to develop their skills in reporting on the environment. This has included working with the Climate Change Media Partnership at the UN climate summits in Bali, Poznan, Copenhagen and Cancun.



SPEAKER BIOS

Rich Loft

Director of Technology Development
Computational and Information Systems Laboratory
NCAR

Dr. Richard Loft has worked in high performance computing since joining Thinking Machine Corporation in 1989, and has worked at the National Center for Atmospheric Research (NCAR) since 1994. At SC2001 he was on a team that received a Gordon Bell prize honorable mention for developing an scalable atmospheric dynamical core called the High Order Method Modeling Environment (HOMME), which went on to become part of NCAR's Community Earth System Model. In 2005, Rich was NCAR PI on an NSF project to deploy and evaluate an IBM Blue Gene/L system. Dr. Loft is currently Director of the Technology Development Division (TDD) in the Computational and Information Systems Laboratory (CISL) at NCAR. In this



capacity he oversees CISL's R&D efforts, in areas such as applied computer science, visualization and enabling technologies, and earth system modeling infrastructure. Software developed in TDD includes the PyNGL (<http://www.pyngl.ucar.edu/>) and VAPOR (<http://www.vapor.ucar.edu/>) visualization systems, as well as the Science Gateway Framework. Recognizing the need to engage the next generation in high performance computing, Dr. Loft created the Summer Internships in Parallel Computational Science program (<http://www2.cisl.ucar.edu/siparcs>) at NCAR. NCAR's TeraGrid Resource Provider PI, and recently oversaw the integration of NCAR resources with the TeraGrid.



Alan Mantooth

Distinguished Professor, Electrical Engineering
University of Arkansas



Dr. Mantooth received the B.S. (summa cum laude) and M. S. degrees in electrical engineering from the University of Arkansas in 1985 and 1987, respectively, and the Ph.D. degree from the Georgia Institute of Technology in 1990. He joined Analog in 1990 where he focused on semiconductor device modeling and the research and development of HDL-based modeling tools and techniques. Besides modeling, his interests include analog and mixed-signal IC design and power electronics. In 1996, Dr. Mantooth was named Distinguished Member of Technical Staff at Analog (now owned by Synopsys).

Dr. Mantooth returned to the UA in 1998, and is currently a Distinguished Professor of Electrical Engineering and established the National Center for Reliable Electric Power Transmission (NCREPT) at the UA in 2005, for which he serves as director. In 2006, he was selected as the inaugural holder of the 21st Century Endowed Chair in Mixed-Signal IC Design and CAD. Dr. Mantooth has published over 200 refereed articles on modeling, power electronics and IC design. He holds patents on software

architecture and algorithms for modeling tools and has others pending. He has received numerous teaching, service, and research awards since returning to the UA, including the 2010-11 Distinguished Researcher Award as the top researcher at the University of Arkansas. He is co-author of the book Modeling with an Analog Hardware Description

Language by Kluwer Academic Publishers and has served on several technical program committees for IEEE conferences.

He is currently serving the profession as a member of the Power Electronics Society Advisory Committee as Chair of the Society's Standards Committee. Dr. Mantooth is a Fellow of IEEE, a member of Tau Beta Pi and Eta Kappa Nu, and registered professional engineer in Arkansas. Professor Mantooth serves as the Executive Director for NCREPT as well as two of its constitutive centers of excellence: the NSF I/UCRC on GRid-connected Advanced Power Electronic Systems (GRAPES) and the NSF EPSCoR Vertically-Integrated Center on Transformative Energy Research (VICTER).



SPEAKER BIOS

John Mateja

Director, McNair Scholars Program
Murray State University

Dr. John Mateja has an interesting background both in and outside of higher education. After earning his B.S. and Ph.D. degrees in Physics from the University of Notre Dame, he was a post-doctoral research associate at Florida State University. He was a faculty member at Tennessee Technological University from 1978-1988. In 1988, he joined the staff at Argonne National Laboratory where he had oversight responsibility for all undergraduate, graduate student, and faculty outreach programs. In 1994, he joined the staff at the Department of Energy headquarters to co-manage a new grant program to assist non-competitive states to become more grant competitive



for federal research funding. In 1998, Dr. Mateja came to Murray State University as the Dean of the College of Science, Engineering, and Technology. Today he is the Director of the Undergraduate Research and Scholarly Activity Office and the McNair Scholars Program, as well as Chair of the statewide Posters-at-the-Capitol program Organizing Committee. Dr. Mateja is also a member of the Boards of the Kentucky Science and Technology Corporation and the Kentucky EPSCoR Committee. During 2008 and 2009, Dr. Mateja was on leave from Murray State University working at the National Science Foundation in Washington, DC.

SPEAKER BIOS



Dan McCormack

Education Development Executive
Apple Computer, Inc

Dan McCormack has over fifteen years of public school experience as a former math and computer-math teacher, and technology administrator and he served for five years as the Superintendent of Schools in Colorado.

His university work was at the University of Texas at Austin, where he received bachelor's degrees in Math and Psychology, and his masters in educational administration. He was a fellow in the eighth cycle of the Cooperative Superintendency Program at UT and received his doctorate in educational administration in 1991.



Dan joined Apple Computer in June of 1996, and has served as an education technology consultant working with district, state and legislative leaders related to strategies and policies for school improvement through technology integration. After working in the southeast US for seven years, he now covers eight western states in the Rockies and Southwest, providing consulting services, and facilitating executive briefings and leadership institutes.



SPEAKER BIOS

Chris Mooney

Bestselling Science Journalist,
Commentator, & Author

Chris Mooney is a science and political journalist, blogger, podcaster, and experienced trainer of scientists in the finer (and occasionally, coarser) arts of communication. He is the author of three books, including the New York Times bestselling *The Republican War on Science*—dubbed “a landmark in contemporary political reporting” by Salon.com and a “well-researched, closely argued and amply referenced indictment of the right wing’s assault on science and scientists” by *Scientific American*—*Storm World*, and *Unscientific America: How Scientific Illiteracy Threatens Our Future*, co-authored by Sheril Kirshenbaum.

He works with the National Science Foundation to train scientists to be better communicators of their research, and travels monthly to different states to do so.

Chris blogs for “Science Progress,” a website of the Center for American Progress. He is a host of the Point of Inquiry podcast and was recently seen on BBC 2 guest hosting a segment of “The Culture Show.”



In the past, Chris has also been visiting associate in the Center for Collaborative History at Princeton University, a 2009-2010 Knight Science Journalism Fellow at MIT, and a Templeton-Cambridge Fellow in Science and Religion. He is also a contributing editor to *Science Progress* and a senior correspondent for *The American Prospect* magazine.

Chris’s 2005 article for *Seed* magazine on the Dover evolution trial was included in the volume *Best American Science and Nature Writing 2006*. In 2006, Chris won the “Preserving Core Values in Science” award from the Association of Reproductive Health Professionals. His 2009 article for *The Nation*, “Unpopular Science” (co-authored with Sheril Kirshenbaum) was included in *Best American Science Writing 2010*.

Chris has been profiled by *The Toronto Star* and *The Seattle Times*, and interviewed by many outlets including *Grist* and *Mother Jones*.

SPEAKER BIOS



Brian Noland

Chancellor, West Virginia Higher Education Policy Commission

Dr. Brian Noland was appointed chancellor of the West Virginia Higher Education Policy Commission in May 2006.

Dr. Noland's professional career has been primarily focused in higher education and higher education policy. Prior to joining the Commission's staff, he served as the Associate Executive Director for the Tennessee Higher Education Commission, and was a faculty member in the Peabody College of Education at Vanderbilt University. His scholarly focus has been in the areas of



access, accountability and governance, with articles published in The Journal of College Orientation and Transition, The Journal of Social Indicators Research, and The Handbook of Political Science Literature on Interest Groups.

Dr. Noland received his bachelor's and master's degrees in political science from West Virginia University, and holds a doctorate in political science from the University of Tennessee, Knoxville.



SPEAKER BIOS

Sharon Nunes

Vice President

Global Government & Smarter Cities Strategy

IBM Corporation

Sharon is currently Vice President, Global Government & Smarter Cities Strategy, IBM Corporation. In this role, Sharon collaborates with the worldwide leaders of IBM's government industry team, developing the strategy for solutions development and execution. She has a special focus on smarter cities, collaborating with clients and partners to help them become more efficient and effective in their operations. Recognizing that smarter cities will be economic growth engines of the 21st century, IBM is applying the company's unique capabilities to create, manage and run intelligent and interconnected infrastructures and systems for cities worldwide. Sharon recently held the role of Vice President, Big Green Innovations where she led the creation of a new business for IBM in Advanced Water Management as part of IBM's Smarter Planet initiative. Sharon led the creation of IBM's water management product and service line, focused on creating solutions for the better management of water resources and water infrastructures around the world.



Sharon has held numerous executive positions leading new growth initiatives in IBM. Sharon launched and led IBM's Computational Biology Center, and was an executive leader in the Life Sciences business unit in its start-up phase.

Sharon received her Ph.D. in Materials Science in 1983

from the University of Connecticut. She has held numerous academic advisory board positions, was a National Academy of Engineering "Frontiers of Engineering" fellow and was a member of the National Academy of Engineering "Engineer of 2020" advisory board.

In 2004 Sharon was awarded IBM's Fran Allen Mentoring Award and in 2006, Sharon was named a NAFE "Women of Excellence" national award winner for her impact in mentoring technical women. In 2009, she was recognized as a Women's History Month Honoree as one of the "Women Taking the Lead to Save our Planet" and was also inducted into the WITI (Women in Technology International) Hall of Fame.

SPEAKER BIOS



Thomas Piechota

Associate Vice President for Interdisciplinary Research
University of Nevada, Las Vegas

Dr. Thomas Piechota is a full professor in the department of civil and environmental engineering at UNLV. In his role as Associate Vice President for Interdisciplinary Research, Dr. Piechota oversees the UNLV Urban Sustainability Initiative, the UNLV EPSCoR Climate Change research team, and the Water Resources research team. He also works closely with the Director of the Science & Engineering Building to fully integrate interdisciplinary research into SEB operations. Piechota received his bachelor's degree in civil engineering in 1989 from Northern Arizona University, his master's degree in civil and environmental engineering in 1993 from UCLA, and his Ph.D. in civil and



environmental engineering in 1997 from UCLA.

His teaching and research interests are in the fields of climate change, sustainability, surface-water hydrology, hydroclimatology, droughts, water resources planning, and storm-water quality in urban environments. In 2003, Piechota received a National

Science Foundation CAREER Award for the project "Improved Hydrologic Drought Forecasting Using Climate Information."

Piechota is a licensed professional engineer in the states of Nevada and California and serves on various committees with the American Society of Civil Engineers.



SPEAKER BIOS

Paul Risser

Chair and Chief Operating Officer
University Research Cabinet
University of Oklahoma



Dr. Paul G. Risser is the chair and chief operating officer of the University of Oklahoma Research Cabinet and coordinates and facilitates research across the University's three campuses. He is also the Executive Director of Oklahoma's Economic Development Generating Excellence (EDGE) program that funds technological research for business development.

Previously Risser was the chief executive officer (Chancellor) for The Oklahoma State System of Higher Education, a state system comprised of 25 state colleges and universities. Before assuming the Oklahoma Chancellor position, Risser was of Oregon State University, where he led the university to record enrollment and impressive research growth over a seven-year span. His professional background also includes serving as President of Miami University, Oxford, Ohio; Provost and Vice President for Academic Affairs and Vice President for Research at the University of

New Mexico; and Chief of the Illinois Natural History Survey.

Risser has a Ph.D. in botany and soils and a master's degree in botany from the University of Wisconsin and a bachelor's degree in biology from Grinnell College.

Among his distinguished national academic recognitions are the appointments as

fellow of the American Association for the Advancement of Science in 1985, and the American Academy of Arts and Sciences in 1994. He also served as President of the American Institute of Biological Sciences, the Ecological Society of America and the Southwestern Association of Naturalists.

His internationally renowned research has evolved into professional consulting relationships with more than 20 national organizations. Risser's research has been widely published (over 100 articles) in refereed journals and he has authored or edited six books.



Regina Schofield

Director, Corporate Engagement & Education Outreach
Battelle



The Honorable Regina B. Schofield is Director of Corporate Engagement and Education Outreach for Battelle in their Washington, D.C. office. Battelle is an international research and development organization based in Columbus, OH. Ms. Schofield's portfolio will include furthering innovative efforts to create tomorrow's technology workforce by leading STEM (science, technology, engineering and math) education initiatives on the east coast. Ms. Schofield's professional career has included key roles in the public, private and not-for-profit sectors.

Prior to her position with Battelle, she was employed with Casey Family Programs and transformed Casey's approach by integrating policies and data from state level stakeholders with broader, national public policy objectives in Washington, D.C. Her leadership and innovation in public policy and external relations also informed major operational changes in Casey's resource allocation strategy across the United States.

Prior to joining Casey, Ms. Schofield was nominated by the President and confirmed by the U.S. Senate to serve as Assistant Attorney

General (AAG) for the Office of Justice Programs at the U.S. Department of Justice. As AAG, she served as the nation's AMBER Alert Coordinator and oversaw a range of federal programs, including Project Safe Childhood, the President's DNA Initiative, the Prisoner Reentry Initiative, and the White House Initiative on Helping America's Youth and many others. In this capacity, Ms.

Schofield had management responsibility for nearly 1,000 employees and a budget of nearly \$3 billion.

Ms. Schofield currently serves on the Board for the Cal Ripken Sr. Foundation. In addition, she has served on numerous boards including the Board of Visitors for the College of William and Mary, the College's Endowment Association, Jackson State University Women's Philanthropy Council, and Family Justice.

She received her M.B.A. from Jackson State University and her bachelor's degree in business administration from Mississippi College. She also holds a certificate of environmental management from The George Washington University.



SPEAKER BIOS

Joe Schreiber

President

Mattmar Productions

Joe Schreiber helped launch and produce NBC's George Michael Sports Machine. The program aired for 23 years, making it the longest running locally produced, nationally syndicated sports show in television history. The heart of the program was the human interest features, produced to appeal to a broad spectrum of viewers. As field producer, and later senior producer, Joe traveled the world, cultivating relationships in the fields of television, film, digital media, public relations, marketing, sports, and entertainment. He built a model for production that is based on trusted relationships and uncompromising production values; it was a way of life that set the industry standard and earned 11 Emmy Awards.



In 2007 Joe launched Mattmar Productions, a company that empowers corporations, the public service sector and non-profits with video and new media, and has garnered four Telly Awards.

Joe is also co-founder and Executive Producer of 3 Penny Films, which produces collegiate sports documentary/reality programming and earned two 2011 Emmy Awards.

Joe is a media training consultant for The National Science Foundation specializing in teaching scientists methods of communication.

He is a 1982 graduate of Boston College and lives in Voorhees, NJ with his wife Sheryl and children Matthew and Marissa.

SPEAKER BIOS



Inanc Senocak

Assistant Professor, Mechanical & Biomedical Engineering
Boise State University

Dr. Senocak received his B.S. degree in Mechanical Engineering from the Middle East Technical University in Ankara, Turkey in 1998. He received his Ph.D. in Aerospace Engineering from the University of Florida, Gainesville in 2002. After his graduation, he held postdoctoral positions at the Center for Turbulence Research (jointly operated by NASA Ames Research Center and Stanford University) and at the Los Alamos National Laboratory, where he worked on large eddy simulation of atmospheric boundary layer



flows and source inversion of atmospheric dispersion events, respectively.

His research interests include computational fluid dynamics (CFD), wind energy forecasting, parallel computing with GPUs, cavitation and multiphase flows, turbulence modeling, atmospheric transport and dispersion, and inverse

problems.

Dr. Senocak is the recipient of the National Science Foundation's CAREER Award.



SPEAKER BIOS

Christine Smith

Executive Director

Science and Technology Advisory Council

Rhode Island EPSCoR

At the RI Economic Development Corporation Christine is responsible for launching statewide economic development initiatives designed to maximize the economic impact of science, technology and innovation. In this role, she currently serves as Executive Director of the Rhode Island Science & Technology Advisory Council (STAC), a coalition of business, academic, medical and government leaders tasked with recommending strategic investments that drive economic development and job growth. STAC activities enhance the state's R&D-related economic development opportunities by promoting collaboration across institutions, leveraging federal investments and encouraging entrepreneurship and venture creation through the transfer of new technologies and discoveries into the marketplace. STAC is the State Governing Committee for NSF RI EPSCoR and develops and implements a State Science Technology Plan that is consistent with Rhode Island's overall economic development strategy.

Christine also oversees the activities of the Rhode Island Research Alliance, a STAC initiative that provides seed funding to multi-institutional, multi-disciplinary teams



to build research capacity and strengthen the ability of Rhode Island investigators to attract federal and corporate research investment. Since its inception in 2006, the Alliance has invested \$6.5 million in 38 teams of 97 investigators representing 35 public and private institutions. To date, the teams have received over \$10 million in follow-on funding with additional dividends expected.

Prior to joining EDC, Christine managed multiple programs across a variety of sectors including non-profit, education (K-16), business and government and has worked in Washington DC as a registered lobbyist for an international energy corporation. She serves on multiple Boards and Committees including the RI Science Leadership Task Force, RI STEM Council, Innovation Providence Implementation Committee, RI INBRE, and the RI Center for Innovation and Entrepreneurship.

Christine is a graduate of the Georgetown University Walsh School of Foreign Service where she received a degree in diplomatic history.

SPEAKER BIOS



Stephanie Smith

Vice President for Academic Affairs

Delaware Technical and Community College

Stephanie Smith is vice president for academic affairs at Delaware Technical Community College. In her 23-year tenure at the College, she has also served as an instructor, department chair, dean of instruction, assistant vice president for articulation, and assistant vice president for planning and assessment. As assistant vice president for articulation, Stephanie's leadership resulted in the development of 23 new articulation agreements and in strong partnerships with the state's 4-year institutions. Since becoming vice president in 2007, Stephanie has spearheaded the launch of 10 new collegewide programs in response to market demand. These include two new associate degrees in energy management and renewable energy that are critical to helping the State of Delaware meet its



aggressive goals to reduce its carbon emissions. She also played a key leadership role in the development of the College's institutional effectiveness structure, which won the 2009 Council for Higher Education Accreditation (CHEA) award for student learning outcomes assessment. Stephanie is currently leading a student success initiative at the

College to increase student engagement and graduation rates.

Prior to joining Delaware Tech, Stephanie served as a social services administrator with the State of Delaware. She has a bachelor's degree in sociology from the University of Delaware, a master's degree in clinical social work from Bryn Mawr College, and a post-master's certificate in social service administration from Temple.



SPEAKER BIOS

Tamara Floyd Smith

Associate Professor of Chemical Engineering
Tuskegee University

Dr. Tamara Floyd Smith is an Associate Professor of Chemical Engineering and 3M Scholar at Tuskegee University. She completed her B.S. degree in chemical engineering at Tuskegee University in 1996. She went directly to graduate school and earned an M.S. in chemical engineering practice in 1998 and a Ph.D. in chemical engineering from MIT in 2001. Then, she joined the staff of Lucent Technologies Bell Labs, Norcross, GA Division (currently OFS) from 2001-2003. In 2003, she joined the faculty of Tuskegee University as an Assistant Professor of Chemical Engineering.

Dr. Floyd Smith's scientific research interests center around microfluidics for materials processing and biosensing. Specifically, she is interested in microfluidics for particle



and film production where either complex microchannel structures or lithographic techniques are enabling. She also conducts studies on how to integrate microfluidics and nanoparticle enhanced phase change materials (NEPCM) for thermal management in high heat flux microelectronic devices.

For biosensing, she focuses on problems where appropriate microchannel structures allow for both improved mixing in environments where laminar flow dominates as well as integration with microelectronic controls. Because Tuskegee University has historically had a teaching focus, Dr. Floyd Smith is also involved in several engineering education research activities. Notably, she is currently studying the relationship between student connection and academic engagement in an NSF funded project joint with four other institutions.

SPEAKER BIOS



Ronald Surdam

Director, University of Wyoming Carbon Management Institute
University of Wyoming

Ronald C. Surdam, Director of the Carbon Management Institute (CMI) at the University of Wyoming, may very well hold the key to Wyoming's future as one of the leading energy producers in the world. Surdam, who was a pioneer in developing new ways to conserve water resources related to coalbed natural gas production in the Powder River Basin, served as a faculty member of the Department of Geology and Geophysics for 32 years, officially retiring in 1998. He received a bachelor's degree in 1961 and a Ph.D. in 1967, both in geology, from the University of California, Los Angeles, and began his UW career in 1966.

In addition to teaching geology, Surdam raised about \$32 million in research support and held director positions at the Institute of Energy Research (1993-1998) and the Enhanced Oil Recovery Institute (1997-1999). He published more than 200 scientific articles in peer-reviewed journals and books, presented approximately 250 invited lectures, and made more than 200 presentations at national and international scientific meetings.



He continues as a prolific researcher with numerous published works.

Surdam has received several awards, including the President's Achievement Award, the College of Arts and Sciences Extraordinary Merit in Research award, the Wyoming Geological Association Morgan Memorial award, and

the American Association of Petroleum Geologists Distinguished Lecturer award. He held the J.E. Warren Professorship of Energy and Environment at the University of Wyoming and holds concurrent or visiting professorships at Nanjing University, Xian Petroleum University, and Northwestern University, all in China. He is a senior consultant to the Shaanxi Provincial Institute of Energy Resources and Chemical Engineering.

Surdam also has made significant contributions to the state of Wyoming, serving on the Environmental Quality Council and the Wyoming Oil and Gas Conservation Commission.



SPEAKER BIOS

Lee Todd Jr. Professor of Engineering Former President University of Kentucky

Lee T. Todd Jr. is a native of Earlington, Kentucky. He received his undergraduate degree in electrical engineering from the University of Kentucky and his Ph.D. degree from the Massachusetts Institute of Technology in electrical engineering. He received six U.S. Patents as a result of his research in large-screen display materials and systems. Upon graduation from MIT, he returned to Kentucky and joined the electrical engineering faculty at the University of Kentucky.

After teaching at UK for nine years, he founded two high-technology companies based on his university research and located in Lexington, Kentucky. Projectron, Inc. developed and manufactured projection cathode-ray tubes for the flight simulation industry. In 1990, Hughes Aircraft Company acquired Projectron and Dr. Todd became a Vice President of Hughes Display Products. Dr. Todd convinced Hughes to bring two of its cathode-ray tube divisions to Kentucky and to build a 165,000 sq. ft. facility on the University of Kentucky Coldstream Research Campus.

Dr. Todd was selected as the 11th president of the University of Kentucky on July 1, 2001, and served in that capacity for ten years. He recently



retired from that position and, after a year's leave-of-absence, will rejoin the electrical engineering faculty at UK. He intends to focus on enhancing the economy of Kentucky by assisting start-up companies and encouraging the further development of existing Kentucky companies and the recruitment of other technology oriented companies.

Dr. Todd has been very active in national efforts to improve math and science education in American schools and to enhance America's economy based on university innovations. He serves as chair of the Advisory Board for the National Science Foundation's Directorate for Education and Human Resources Committee. He is immediate past chair of the Board of Directors for the Association of Public and Land-Grant Universities (APLU) and served as chair of the APLU Science Math Teacher Imperative (SMTI).

Dr. Todd presently serves on a 22-member National Academies' Committee on Research Universities that has been charged by Congress to study the future of America's research universities and make recommendations for actions to insure future international competitiveness. The National Academies serve as "Advisers to the Nation on Science, Engineering and Medicine.

SPEAKER BIOS



Paul Werbos

Program Director, EFRI and ECCS
National Science Foundation

Dr. Paul Werbos has responsibility for the following Core ECCS areas: Adaptive and Intelligent Systems (AIS), Quantum systems and device modeling (QMHP), and systems-level power grids (GRID).

Dr. Werbos has led a variety of other areas, such as fuel cell and electric vehicles, emerging technologies, cyber systems and the sustainability part of IDR since he started at NSF in 1988. He is a



Fellow of IEEE and INNS, a winner of the IEEE Neural Networks Pioneer Award and winner of the Hebb Award for 2011 from the International Neural Network Society (INNS). The Hebb Award is INNS's highest award, to honor substantive contributions to the understanding of biological learning systems.



SPEAKER BIOS

Mark Wilson

State Director, Office of Curriculum, Career and Technical Education
South Dakota State Department of Education

Mark Wilson serves as the State Director for the Office of Curriculum, Career and Technical Education for the South Dakota Department of Education. He has been with the department for six years. He works directly with the State's four Postsecondary Technical Institutes. The four Technical Institutes are in the middle of campus expansion. The Technical Institutes have a very high



graduation and placement rate. The Technical Institutes are key to the workforce development in South Dakota. SDMyLife is a key piece to the career development focus for secondary schools. All students are required to have a Personal Learning Plan focused within one of the sixteen career clusters. Mark focuses on building partnerships to create opportunities for students to participate in rigorous and relevant programs.



Judy Wu

University Distinguished Professor
Department of Physics and Astronomy
University of Kansas

Dr. Judy Wu is a distinguished professor of Physics at the University of Kansas and directs the NSF EPSCoR Kansas Center for Solar Energy Research. She received her PhD degree in Physics from the University of Houston in 1993 and joined the faculty of the Physics department at the University of Kansas shortly afterwards. Her Thin Film and Nanoscience group in KU (University of Kansas) Physics has been actively working at the interface between nanoscience and material science/physics and has been supported by extensive funding from NSF, DOE, AFOSR, ARO, MDA, and industry. She is specialized in synthesizing nanostructured materials, fabricating nanoscale devices and characterizing physical properties at microscopic scales. She has authored/coauthored more than 140 scientific publications, 3 book chapters, 7 US patents (5 awarded and 1 pending) and has



given more than 90 invited/plenary lectures at national/international conferences and workshops.

Dr. Judy Wu was elected to the Board of Directors for Applied Superconductivity Conference in 2002 and has served/chaired Technical committee and lead editor for many years. She has been

co-chairing the Material Task Force on US senator Pat Roberts' advisory committee for Science, Technology and Future of Kansas since 1999. Dr. Wu has served on many review panels for DOE, NSF and DOD research programs and has organized/chaired numerous symposia/technical sessions for various national and international conferences including American Physical Society, Material Research Society, American Ceramic Society, Applied Superconductivity conf, etc.



SPEAKER BIOS

Steven Zipkes

Principal

Manor New Tech High School

As the founding Principal of the highly acclaimed and nationally recognized Manor New Technology High School, Mr. Zipkes' leadership promotes teacher quality through Project Based Learning. MNTH was recognized for teaching 21st Century Skills by Apple as an Apple Distinguished School, and was named a Model School by the International Center for Leadership in Education, and became a Secondary Showcase School by The Center for Secondary School Redesign. In his March



3rd speech, US Secretary Arne Duncan highlighted MNTH as a "model school for reaching underserved youth." Mr. Zipkes has led 2 high schools and one middle school to their first ever TEA Exemplary Ratings and last year MNTH was recognized by Harvard University for closing the achievement gap where Mr. Zipkes and a team of teachers presented at The Achievement

Gap Initiative at Harvard University and recently, Steven was named an Apple Distinguished Educator.

AT A GLANCE AGENDA

Start Time	Monday	Tuesday	Wednesday	Thursday	
6:30 AM	Registration All Attendees All Day	Registration and Breakfast Buffet (Dockside Restaurant)	Breakfast Buffet (Dockside Restaurant)	Breakfast Buffet (Dockside Restaurant)	
7:00 AM					
7:30 AM		Registration All Attendees All Day	Welcome Remarks (Bays 2 and 3)	Plenary Session: Workforce Development Director, OIA/NSF and Tom Burnett (Bays 2 and 3)	Plenary Session: Energy Paul Werbos and Ronald Surdam (Bays 2 and 3)
8:00 AM					
8:30 AM			9:15am Plenary Session: Water/Environment Sharon Nunes (Bays 2 and 3)	Networking Break (Casco/Kidd/North Cape)	Networking Break (Casco/Kidd/North Cape)
9:00 AM					
9:30 AM			Plenary Session: Water/Environment Moderated (Bays 2 and 3)	Plenary Session: Workforce Development Moderated (Bays 2 and 3)	Plenary Session: Energy Moderated (Bays 2 and 3)
10:00 AM					
10:30 AM			Lunch Keynote: Tim Killeen (Bays 2 and 3)	Lunch Keynote: Clifford Gabriel (Bays 2 and 3)	Lunch Plenary Session: Enhancing State and Regional Keynote: NSF (Bays 2 and 3)
11:00 AM					
11:30 AM	PD/PA/EOD Meeting (Bay 5) Lunch Keynote: Denise Barnes		Concurrent Sessions: 1)Water/Env. (Bay 4) 2)Workforce Dev. (Bay 5) 3)Student Comm. (Bay 6)	Concurrent Sessions: 1)Governing Cmte(Bay 4) 2)Comm. Science (Bay 5) 3)iTunes U Workshop (7th Flr Brdrm 5 A/B/C)	Plenary Session: Enhancing State and Regional - Moderated (Bays 2 and 3) until 3:15pm 3:15pm Steps Forward Goodwin/Blount (Bays 2 and 3)
12:00 PM					
12:30 PM		Networking Break (Casco/Kidd/North Cape)	Break and Preparation for Tour	3:45pm Concurrent Sessions: 1)Workforce Dev. (Bay 5) 2)Energy (Bay 4)	
1:00 PM					
1:30 PM		Concurrent Sessions: 1)Student Research Poster Presentations (Casco/Kidd/North Cape) 2)iTunes U Workshop (7th Flr Brdrm 5 A/B/C)	3:45 pm Lake Tour W/Research Speaker & Dinner (Meet in Bays 2 and 3 at 3:45pm)	Conference Adjourns	
2:00 PM					
2:30 PM		Native American Exhibition/Dinner Keynote: Chief Allan (Bays 2 and 3)	Student-led Networking Event		
3:00 PM					
3:30 PM		Welcome Gathering (Bays 4 and 5)			
4:00 PM					
4:30 PM	Student Poster Setup (Casco/Kidd/North Cape)				
5:00 PM					
5:30 PM	Student Communication Workshop (Bay 6)				
6:00 PM					
6:30 PM					
7:00 PM					
7:30 PM					
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